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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,655

12/20/2005

Graham R. Purkins

58852US004

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7590

08/27/2010

3M INNOVATIVE PROPERTIES COMPANY

PO BOX 33427

ST. PAUL, MN 55133-3427

EXAMINER

JACYNA, J CASIMER

ART UNIT

PAPER NUMBER

3754

NOTIFICATION DATE

DELIVERY MODE

08/27/2010

ELECTRONIC

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/561,655  
Filing Date: December 20, 2005  
Appellant(s): PURKINS, GRAHAM R.

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C. Michael Geise  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 7/16/2010 appealing from the Office action mailed 12/28/2009.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims 1-21 are pending.

Claims 1-8 and 15-21 were finally rejected on 12/28/2009 and are currently appealed.

Claims 9-14 are withdrawn from consideration.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office

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action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

**(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

**(8) Evidence Relied Upon**

5,772,085	Bryant et al.	6-1998
4,522,374	Neff	6-1985
2002/0020721	Bonningue et al.	2-2002
6,739,333	Hoelz et al.	5-2004

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, 5-8, and 15-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant et al. 5,772,085 in view of Neff 4,522,374. Bryant discloses the prior art metering valve as disclosed on page 5, lines 1 and 2 of the specification including, as shown in figures 1a and 1b of Bryant, an aerosol valve stem 12 which is used within the metering valve 2, the aerosol valve stem being an elongate stem element as shown at 12 having a sealing element 16 or 18 which are affixed onto the valve stem by being located in grooves 7 on the valve stem with either seal 16 or 18

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having an inner surface which is the surface in contact with the base of the groove 7 with the inner surface of the seal and the seal overlying the portion of the valve stem at the base of the groove 7 substantially as claimed but does not disclose an elastomeric sleeve molded onto at least a portion of the valve stem. However, Neff teaches another valve stem or spool 12 having a rubber elastomeric sleeve as shown in figures 1 and 2 overlying the entire stem body 12 as shown at points 60-64 and as disclosed in column 4, lines 8-27. The valve stem 12 of Neff is further provided with an overlying o-ring sealing element 68 and 68a-c as shown in figures 3 and 5-7 having an inner surface which is in contact with and overlies the elastomeric sleeve as seen in the figures with the elastomeric sleeve being provided for the purpose of improving the sealing properties of the valve. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the valve of Bryant with a rubber elastomeric sleeve on the valve stem and underneath the existing overlying sealing element 16 or 18 as, for example, taught by Neff in order to improve the sealing properties of the valve. In regard to claim 2, on column 16, lines 40-44, Bryant discloses the valve stem to be metal. In regard to claim 5, Neff discloses the sleeve to be a molded elastomer on column 4, lines 8-27 wherein a molded elastomer is a thermoplastic elastomer as claimed. In regard to claims 6 and 7, column 7, lines 18-39, disclose the sealing element 16 or 18 to be made from a thermoplastic elastomer, and, in regard to claim 8, an ethylene-propylene-diene or EPDM elastomer. In regard to claims 15 and 16, the valve shown in figures 1a and 1b of Bryant is a metered dose dispensing valve as disclosed on line 1 of the Abstract which dispenses a pressurized

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aerosol formulation having the claimed dispensing and non-dispensing positions as disclosed in the Abstract with a chamber 6 and an outlet passage 10. In regard to claim 17, Bryant discloses two second sealing elements 16 and 18 and Neff discloses a continuous sleeve that covers the entire valve stem body which inherently includes first and second sleeves under each of the sealing elements 16 and 18 of Bryant. In regard to claims 18 and 19, Bryant discloses the valve to be used with a container 120 in figure 15 and a medicinal formulation on column 1, lines 10-15.

Claims 3 and 4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant et al. 5,772,085 in view of Neff 4,522,374 as applied to claims 1 and 2 above and further in view of Bonningue et al. 2002/0020721. Bryant discloses an aerosol valve substantially as claimed but does not disclose the stem to be made of a thermoplastic polymer. However, Bonningue teaches another aerosol valve having the stem made from the thermoplastic polymer polypropylene as disclosed on paragraph 48, for the purpose of providing a specific and chemically inert material from which to manufacture the aerosol valve. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the aerosol valve of Bryant from a thermoplastic polymer such as polypropylene as, for example, taught by Bonningue, in order to provide a specific and chemically inert material from which to manufacture the aerosol valve.

Claims 20 and 21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant et al. 5,772,085 in view of Neff 4,522,374 as applied to claim 19 above and further in view of Hoelz et al. 6,739,333. Bryant discloses a medicinal aerosol inhaler

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substantially as claimed but does not disclose any specific propellant. However, Hoelz teaches another aerosol inhaler having the claimed propellant mixture as disclosed on column 5, lines 1-11, for the purpose of providing a specific propellant formulation that is suitable for use in inhalers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the inhaler of Bryant with a propellant as disclosed on column 5, lines 1-11, of Hoelz in order to provide a specific propellant formulation that is suitable for use in inhalers.

#### **(10) Response to Argument**

First Ground of Rejection: Appellant contends that the spool valve of Neff is non-analogous art and is incapable of functioning in the medicinal valve environment. However, Bryant clearly discloses a medicinal metering valve and valve stem which only lacks the claimed elastomeric sleeve. Neff provides a clear teaching of coating or applying a sleeve over an entire valve stem which sleeve is made from the same group of elastomeric materials as claimed. Since the sleeve taught by Neff is made from the same group of materials as disclosed and claimed, the sleeve, or the sleeve material, is inherently capable of functioning in the medicinal environment of Bryant. Both Bryant and Neff are drawn to sliding valve stems which are used in a pressurized environment. As discussed in the Background Art and Disclosure of the Invention of Neff, there is a problem with maintaining the seal integrity around the valve stem grooves. Bryant also has seals 16 and 18 located in grooves 7 of a sliding valve stem in a pressurized dispenser. As discussed in the Background Art and Disclosure of the Invention of Neff, Neff teaches that adding an elastomeric sleeve over the entire valve stem and placing

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the o-ring type seals 68, 68a-c in Neff, over the elastomeric sleeve serves to enhance the efficacy of the seals. One of ordinary skill in the art would realize that the teachings of an elastomeric sleeve in Neff were applicable to the grooved valve stem of Bryant and that the elastomeric sleeve of Neff could also improve the functionality of seals 16 and 18 of Bryant with a high probability of success.

Second and Third Grounds of Rejection: Appellant contends these rejections for the reasons given in the first ground of rejection. These rejections are maintained for the reasons given in the first ground of rejection. Both Bonningue and Hoelz teach the use of materials that are well known and considered obvious in the aerosol dispensing arts wherein one of ordinary skill in the art would have considered the usage of the claimed materials in Bryant to be well known with a high probability of success.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/J. Casimer Jacyna/  
Primary Examiner, Art Unit 3754

Conferees:

/Kevin P. Shaver/  
Supervisory Patent Examiner, Art Unit 3754

/Len Tran/

Supervisory Patent Examiner, Art Unit 3752